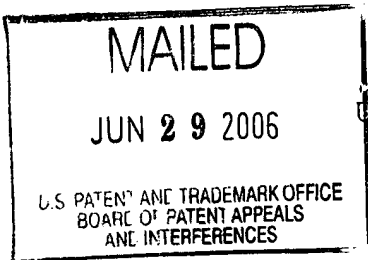


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GUILLERMO R. VILLALOBOS, JAS S. SANGHERA,
SHYAM S. BAYYA and ISHWAR D. AGGARWAL

Appeal No. 2006-1218
Application No. 10/601,884

ON BRIEF

Before KIMLIN, GARRIS and PAK, Administrative Patent Judges.
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal, which involves claims 1, 4-5, and 19-20.

The subject matter of this application is drawn to a transparent sintered ceramic product. This product may be used for windows, automotive glass, laptop computers, cell phones, aerospace windshields, and industrial blast shields among other things (page 2, lines 7-9). The sintered ceramic product

preferably has a spinel crystal structure. Spinel is a metallic oxide crystal form having the general formula of AB_2O_4 where A is a 2+ cation occupying tetrahedral lattice sites in an oxygen cubic close packed structure and B is a 3+ cation occupying octahedral lattice sites. The preferred metals in the spinel structure are magnesium and aluminum (page 1, line 19 - page 2, line 4). Particularly, the claims are drawn to a spinel product essentially free of sintering aids having a porosity of less than 0.2% and a particular grain size.

Further details regarding this subject matter are set forth in representative independent claims 1 and 19 which read as follows:

1. A product that is essentially devoid of a sintering aid and its components, said product comprising spinel that has porosity of less than 0.2%, said spinel is transparent to light having wavelengths in the range of 0.3-5.5 microns and said spinel having transparency in excess of 50% for a thickness of 1 mm, its spinel grains are within about 300% of the size of an average grain and is devoid of grains larger than about 1 mm.

19. A magnesium aluminate spinel sintered product that is essentially devoid of a sintering aid and its components, that has porosity of less than 0.2%, has uniform grain size wherein the grains are less than 300% of the average grain size and is devoid of grains larger than about 1 mm.

The reference set forth below is relied upon by the Examiner as evidence of anticipation or obviousness:

Sellers et al. (Sellers)	3,768,990	Oct. 30, 1973
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All of the claims on appeal are rejected under 35 U.S.C. §§ 102(b)/103(a) as being unpatentable over Sellers.

Rather than reiterate the respective positions advocated by the Appellants and by the Examiner concerning these rejections, we refer to the brief and to the answer respectively for a complete exposition thereof.

OPINION

For the reasons provided below, the 35 U.S.C. §§ 102(b)/103(a) rejections are sustained.

Generally, when an examiner has set forth prior art showing that a prior art product is identical or substantially identical to that claimed by an applicant, then the burden of proof shifts to applicant to demonstrate that the prior art and claimed products do not possess the same characteristics. See In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). The court in Best articulated this principle and the reasons therefore as follows:

Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. See In re Ludtke, [441 F.2d 660, 169 USPQ 563 (CCPA 1971)]. Whether the rejection is based on 'inherency' under 35 U.S.C. § 102, on 'prima facie obviousness' under 35 U.S.C. § 103, jointly or

alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products. Id.

Moreover, to support a rejection of inherency an examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. Ex parte Levy, 17 USPQ2d 1462, 1464 (Bd. Pat. App. & Int. 1990).

In Appellants' corrected appeal brief filed August 17, 2005, Appellants have presented only one argued distinction between the Sellers' patent and their claims.¹ Appellants solely argue that Sellers teaches that loss of the sintering aid, LiF, is to be avoided by heating for not more than about 30 minutes. In contrast, Appellants state that their claims require that the spinel product be essentially devoid of the sintering aid. It is further noted that Appellants have not set forth any declaration or affidavit of record to rebut the Examiner's finding that Sellers' product is "essentially devoid of a

¹ Appellants submitted a brief on June 20, 2005 that was non-compliant with the New Rules of Practice before the Board of Patent Appeals and Interferences, which took effect September 13, 2004. Therefore, in assessing the issues on appeal, we consider only this corrected brief of August 17, 2005.

sintering aid.”² Moreover, the “Evidence Appendix” in the corrected brief filed August 17, 2005 indicates that no evidence is provided.

We find that the Examiner’s rejection-exposition and his rebuttal of Appellants’ sole argument have set forth the findings required to support a prima facie case of unpatentability based on inherency. In the Examiner’s answer and final rejection, the Examiner relies on similarities between Sellers’ product and the claimed product. The Examiner finds that Sellers, like Appellants, teaches a magnesia-alumina spinel product having high transparency for a wide range of wavelengths. In fact, Appellants’ claimed wavelength range of 0.3-5.5 microns and transparency in excess of 50% for a thickness of 1 mm fully encompasses the wavelength and transparency ranges disclosed by Sellers (column 4, lines 1-8).

In response to the Appellants’ afore-noted argument, the Examiner states that Sellers teaches a two-step heating process wherein during the first phase of the heating process the LiF sintering aid is retained as Appellants have observed in their corrected appeal brief. In the second stage, however, the spinel product is heated to between 1300°C to 1600°C for a time

² Appellants submitted a declaration on April 20, 2005, which was denied entry by the Examiner. As such, the declaration is not of record and is not before the Board.

period of 30 minutes to 3 hours (column 3, lines 40-43). It is the Examiner's finding that the LiF sintering aid is removed from Sellers' product during this second stage. In support of his finding, the Examiner relies upon Appellants' admission in the response filed January 7, 2005 that a temperature of 1550°C is "too high for the sintering aid to remain in the product."

This finding is also supported by the fact that Sellers' heating schedule falls entirely within that disclosed in the Appellants' specification. On page 11 of the specification the following temperature schedule is employed:

1. temperature is increased from ambient to 950°C and held there for 30 minutes to melt the LiF sintering aid,

2. temperature is increased from 950°C to 1200°C and held for 30 minutes to allow the vaporized LiF to leave the product, and

3. temperature is increased from 1200°C to 1550°C and held for 2 hours to fully densify the product.

As is clearly indicated by Appellants' disclosure, when spinel is heated to a temperature of 1200°C, the LiF sintering aid is vaporized and removed from the product. Sellers heats his product to a temperature higher than 1200°C (i.e. 1300°C to 1600°C). Moreover, Appellants teach that the 1200°C temperature

is maintained for a time period of 30 minutes (Specification, page 11) which is fully encompassed by Sellers' heating time period of 30 minutes to 3 hours. From Appellants' own disclosure one can justifiably find or conclude Sellers' higher temperatures and heating time period would necessarily and inherently result in removing the LiF sintering aid from his spinel product such that the product is "essentially devoid of a sintering aid" (appealed independent claims 1 and 19).

In light of the foregoing, there is a basis in fact for believing that Sellers' product is identical to Appellants' claimed product at least relative to the one and only "distinction" argued in the brief. Accordingly, the burden of proof has shifted to Appellants to show that patentee's product does not possess the same characteristics as the here claimed products. Best, 562 F.2d at 1255, 195 USPQ at 433. Appellants have failed to fulfill their burden by providing any such evidence of record.

In response to the Examiner's answer, Appellants filed a reply brief. In the reply brief, Appellants refer to the non-entered declaration that was filed April 20, 2005 and attach a handout that was given to the Examiner during an April 1, 2005 interview. It is improper for Appellants to refer to

non-entered declarations and other new evidence in the reply brief. This prohibition is directly addressed by rule 37 C.F.R. § 41.41. This rule states in relevant part that, "a reply brief shall not include . . . any new or non-admitted affidavit or other evidence." As such, the Board has not considered the non-entered declaration and its contents.

Regarding the handout attached to the reply brief, we note that page 3 titled, "Trapped LiF due to Rapid Heating," has a photographic comparison of Appellants' product with Sellers' prior art product, whereas page 3 of the handout submitted at the April 1, 2005 interview does not. This comparison is new evidence, which according to the aforementioned rule, 37 C.F.R. § 41.41, shall not be included in a reply brief. As such, we will not consider the reply brief handout. However, even if we consider the reply brief handout or, for that matter, the interview handout, the material presented therein does not persuade us that the Examiner's inherency findings are in error. The reply brief and the interview handouts relate to a comparison of the general disclosure in the Sellers patent and Appellants' specification, as opposed to the specific subject matter defined by the appealed claims. As such, in the context of the claimed subject matter, the handouts have little, if any,

evidentiary value in satisfying the Appellants' burden of showing that Sellers' product actually differs from the claimed product.

Moreover, in the reply brief, Appellants advance arguments based on the aforementioned declaration and attached handout that were not presented in the appeal brief. For example, Appellants argue, inter alia, that the declaration and handout show that Sellers' LiF sintering aid is trapped in pores, and that Appellants obtain a non-exaggerated grain size. We will not consider such arguments for two reasons. First, they are unacceptably based on the non-entered declaration. Second, arguments not made in the opening brief and thus raised for the first time in a reply brief are considered waived. Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1320-1321 n.3, 76 USPQ2d 1662, 1683 n.3 (Fed. Cir. 2005).

In summary, the Examiner has established a reasonable basis in fact in support of his finding that the product disclosed by Sellers is identical to the product claimed by Appellants, and Appellants have failed to carry their burden of proving that patentee's product does not necessarily or inherently possess

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the characteristics of the here claimed product. Best, 562 F.2d at 1255, 195 USPQ at 433.


The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv) (effective Sept. 13, 2004).

AFFIRMED


EDWARD C. KIMLIN
Administrative Patent Judge


BRADLEY R. GARRISS
Administrative Patent Judge


CHUNG K. PAK
Administrative Patent Judge

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BRG : mpc

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